

CLAIMS

I Claim:

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1. A method for providing image data:

receiving a rendering command;

rendering an image based upon the rendering command, wherein the image is to

be stored at a first memory location of a first frame buffer;

determining a second memory location representative of a raster location;

enabling storage of the image at the first memory location when the second

memory location indicates the raster has accessed data at the first memory

location; and

preventing storage of the image at the first memory location when the second

memory location indicates the raster has not accessed data at the first

memory location.

2. The method of claim 1, wherein the step of receiving a rendering command, includes

receiving a rendering command from a system processor.

3. The method of claim 1, wherein the first memory location and the second memory

location are representative of a specific bytes of data.

4. The method of claim 1, wherein the first memory location and the second memory

location are representative of a unique groups of data.

5. The method of claim 4, wherein the unique groups of data includes data to be

displayed as at least a portion of a line of video/graphics.

6. The method of claim 1, wherein the second memory location indicates a data accessed

by a display device controller.

1 7. The method of claim 1, wherein the second memory location indicates a data to be
2 accessed by a display device controller.

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1 8. A method of providing image data:
2 defining a graphics primitive having a first portion at X and a second portion at Y,
3 wherein X and Y are indicative of address locations;
4 providing the graphics primitive to a rendering engine when the rendering engine
5 is storing data to a frame buffer being accessed by a display device
6 controller providing a current image, where the display device controller is
7 yet to access an address location Z having data associated with the current
8 device and the location Z is between X and Y.
9 preventing tearing of the current image;

1 9. The method of claim 8 wherein the address locations include display line numbers.

1 10. The method of claim 9 wherein the address locations include one of physical and
2 logical address locations.

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1 11. A method of providing image data:
2 accessing a first portion of video/graphics data from a first portion of a frame
3 buffer for display on a display device;
4 storing a first portion of an image primitive to the first portion of the frame buffer
5 after the step of displaying the first portion of video/graphics data; and
6 prohibiting a second portion of the image primitive from being stored to a second
7 portion of the frame buffer after the step of storing the first portion,
8 wherein the second portion is adjacent to the first portion.

1 12. The method of claim 11, further comprising the steps of:

2 accessing a second portion of video/graphics data from the second portion of the
3 frame buffer for display on the display device after the step of prohibiting;
4 and

5 storing the second portion of the image primitive to the second portion of the
6 frame buffer after the step of accessing the second portion of
7 video/graphics data.

1 13. A system for storing video/graphics data, the system comprising:

2 a rendering engine to render images; and

3 a write behind raster controller coupled to the rendering engine to prohibit write
4 access to memory locations that have not been displayed.

1 14. The system of claim 13 further comprising:

2 a display device controller coupled to the write behind raster to indicate a raster
3 location.

1 15. The system of claim 13, wherein the rendering engine further includes:

2 a rendering engine location register, wherein the rendering engine location register
3 is to store a first memory location to be accessed by the rendering engine;
4 and

5 an over-run detect portion coupled to the rendering engine location register, and
6 coupled to receive a raster location indicator, and to provide an over-run
7 detect indicator, wherein the raster location indicator indicates a second
8 memory location relative to a location currently accessed by the rendering
9 engine, and the over-run detect indicator to prohibit the rendering engine
10 from write accessing to memory locations.

16. The system of claim 13, wherein the write behind raster includes:

- a multiplexor having a first input, a second input, and an output;
- a latch having an input coupled to the output of the multiplexor, and an output;
- a comparator having a first input coupled to the output of the latch, a second input, and an output; and
- an incrementor having a first input coupled to the output of the latch, and an output coupled to the first input of the multiplexor.

17. A system for storing video/graphics data, the system comprising:

- a rendering engine for rendering a primitive image and writing data representing the primitive image into a frame buffer;
- a display device controller for reading data from the frame buffer for display; and
- a write prohibit means coupled to the display device controller to receive an indication of data read by the display device controller, and coupled to the rendering device to prevent a first portion of the primitive image from being written to the frame engine, while allowing a second portion of the primitive image to be written to the frame buffer.

~~18. The system of claim 17, wherein the first portion is prevented from being written by stalling the rendering device.~~

19. The system of claim 17, wherein the write prohibit means further allows the first portion of the primitive image to be written to the frame buffer based on an updated status of the indication of data read by the display device.

20. The system of claim 17, wherein the indication of data read indicates the access status of a line of video/graphics data.

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